



## APPRAISAL BULLETIN

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*Real Estate Economists, Appraisers and Counselors*

### CHARTING INCOME PROPERTIES

**F**OR many years industrial economists have made use of income and expense charts to portray their companies' financial statements. One type of chart, in particular, has been found to be of extreme value. This chart shows the break-even point of income to expenses. Many relationships can be illustrated by this type of charting. Some of these are:

1. Expenses to output value.
2. Expenses to sales volume.
3. Sales volume to production costs.

These relationships can be based upon a per unit rate, monthly rate, or an annual rate. Top management can obtain a realistic picture of profits and losses from this chart, and act accordingly.

The use of this type chart to portray the financial experience of an income-producing property is a unique innovation. The chart will enable investors to see the immediate financial status of any property in their real estate portfolio. The data necessary to construct a chart may be found in either an appraisal report on the property, or in the investor's records on the property. An appraisal report, when available, is usually the most accessible source of data.

Charts can be made to show relationships as follows:

1. Operating expense to rental income.
2. Operating expenses and percentage lease sales volume.
3. Operating expense and percentage vacancies.

The first step in developing a chart is to divide expenses into two categories - one showing fixed expenditures, the other, variable expenditures. Under fixed expenditures are included:

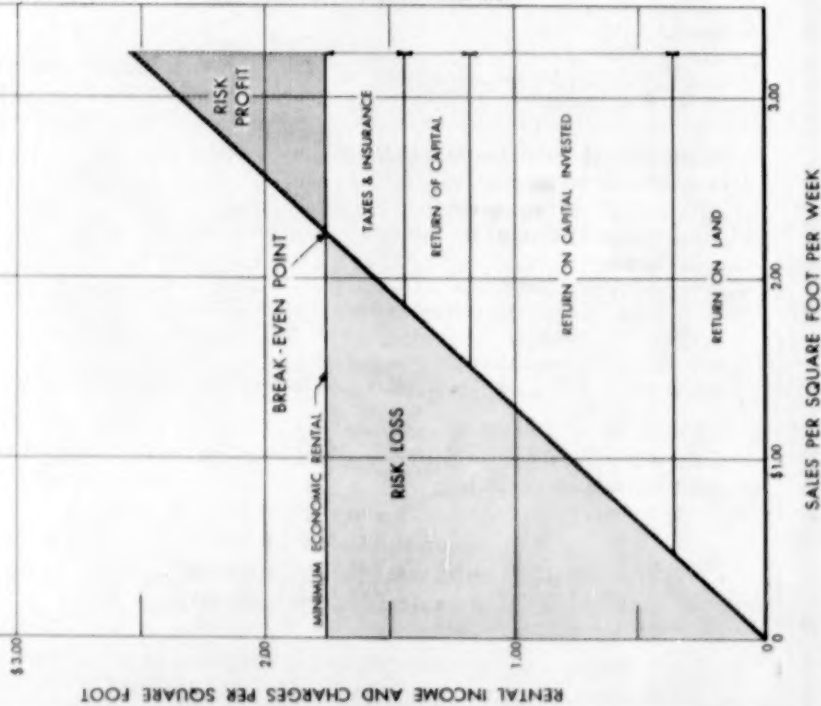
1. Return on land.
2. Return on capital (improvements).
3. Return of capital (improvements).

These items may be more properly referred to as capital investment income and capital return rather than fixed items of expense.

EXAMPLE I

## SUPER MARKET INCOME RETURN CHART

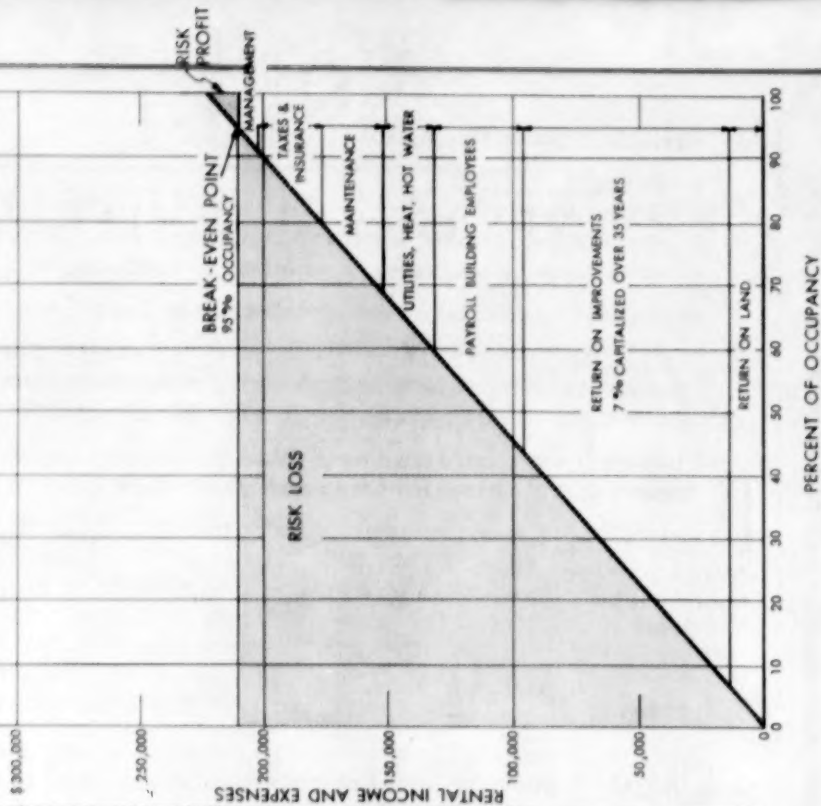
POB BIG CHAIN SUPERMARKET  
6605 Watson Road  
St. Louis, Missouri



EXAMPLE II

## OFFICE BUILDING INCOME RETURN CHART

POB DELMAR BUILDING  
8th and Delmar Streets  
St. Louis, Missouri



Variable expense items are:

1. Taxes. \*
2. Insurance. \*
3. Operating expenses, such as: utilities, air-conditioning and heating, general tenant services, decorating and repairs, etc.

\*Normally considered by the appraiser to be fixed items of expense.

The property will determine the base for the chart. For example: super-markets use sales per square foot per week; department stores use annual sales per square foot; office buildings may be charted on vacancy ratios, etc.

Listed below are two examples of data selected from appraisal reports made by our organization. Charts for these examples will be found on the opposite page.

**Example I.** A new supermarket under lease to a national chain organization has an appraisal value of \$244,000. The property is under lease for an annual rental of 1.5% of gross sales, with a minimum rental of \$1.75 per square foot. The lease is net, except for taxes and insurance. It is for a period of 10 years with options for renewal. The building has an area of 15,000 square feet with an improved parking lot of 45,000 square feet. The chain organization estimates sales to average \$2.25 per square foot per week. The data for the chart is shown below:

Big Chain Supermarket, 6605 Watson Road, St. Louis, Missouri

Value of land . . . . .	\$ 90,000
Value of building . . . . .	142,500
Value of parking lot improvements . . . . .	11,500
Total Value . . . . .	\$244,000

Computation of Minimum Rental per Square Foot:

Annual return on land . . . . .	6.0% - \$ 5,400	\$0.36 per sq. ft.
Annual return on improvements . . . . .	8.0% - 12,320	0.82 per sq. ft.
Annual return of capital invested in improvements . . . . .	2.5% - 3,850	0.26 per sq. ft.
Annual taxes . . . . .	4,200	0.28 per sq. ft.
Annual insurance premium . . . . .	450	0.03 per sq. ft.
Total Annual Minimum Rental . . . . .	\$26,220	\$1.75 per sq. ft.

Lease Rental Income Schedule Based on Weekly Sales:

Weekly Sales per Sq. Ft.	Total Annual Sales	Total Annual Rent	Annual Rent per Sq. Ft.
\$1.00	\$ 780,000	*	**
1.50	1,170,000	*	**
2.00	1,560,000	*	**
2.25	1,755,000	\$26,325	\$1.76
2.50	1,950,000	29,250	1.95
2.75	2,145,000	32,175	2.15
3.00	2,340,000	35,100	2.34
3.25	2,535,000	38,025	2.54

\*Minimum rental \$26,220

\*\*Minimum rental \$1.75 per sq. ft.

The chart gives the investor a visual summary of the property's income status. When weekly sales per square foot drop below the minimum income level, the investor should keep a watchful eye on the property. If, over a six months' period, sales fail to improve, he then should investigate the store's operation. If the fault does not lie with the operator, perhaps he should consider disposing of the property.

**Example II.** An office building in the downtown business district was valued at \$1,312,600 by our appraisal department. The building, of 11 stories plus basement, has a rental area of 87,119 square feet. Average annual rental is \$2.70 per square foot, excluding the basement area. There are 14,498 square feet of vacant space in the building at the present time. The building has a remaining economic life estimated at 35 years. Data for the chart on page 508 is shown below:

Delmar Building, 6th and Delmar, St. Louis, Missouri		
Value of land . . . . .	\$	255,000
Value of building . . . . .		1,057,600
Total Value . . . . .		\$1,312,600
Annual return on land 5.5% . . . . .	\$14,025	
Annual return on improvements 7%, capitalized over 35 years . . . . .	82,260	\$ 96,285
Variable Expense Items:		
Payroll of building employees . . . . .	\$	35,890
Utilities, heat and hot water . . . . .		19,600
Maintenance cost, supplies and sinking fund requirements . . . . .		25,525
Annual taxes and insurance . . . . .		24,195
Management charge . . . . .		10,605
Total of Fixed and Variable Expense Charges . . . . .		\$212,100
Total annual rent 100% occupancy . . . . .	\$223,264	
Average rent per month 100% occupancy . . . . .		18,605

The chart clearly indicates that the break-even point is at the 95% occupancy point. If the rental schedule were increased, the break-even point would be at a lower occupancy level. Considering the present trend of office building occupancy, management should give some thought to revising the rental schedule. Building management can use this chart monthly to determine its income-expense position. Occupancy percentage should be derived by taking the monthly income and dividing it by average monthly rent at 100% occupancy. The percentage occupancy also can be derived on an accumulative basis for any period during the year.

Charts showing the break-even point can be computed for many other types of properties. It is hoped that the two illustrations will enable appraisers and investors to chart properties that require constant watching.

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